



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,521	01/14/2000	Hideyuki Masuyama	00021/Lh	8500
7590	11/21/2003		EXAMINER	
Frishauf, Holtz, Goodman, Langer & chick, P. C. 767 Third Avenue -25th Floor New York, NY 10017-2023			ROSENDALE, MATTHEW L	
			ART UNIT	PAPER NUMBER
			2612	
			DATE MAILED: 11/21/2003	
				7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/483,521	MASUYAMA ET AL.	
	Examiner Matthew L Rosendale	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 January 2000 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 - 1) Certified copies of the priority documents have been received.
 - 2) Certified copies of the priority documents have been received in Application No. _____.
 - 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3-6</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Drawings

Figures 3 and 4 are objected to for being color drawings filed without a proper petition.

Color photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) is granted permitting their use as acceptable drawings. In the event that applicant wishes to use the drawings currently on file as acceptable drawings, a petition must be filed for acceptance of the color photographs or color drawings as acceptable drawings. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 – 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravkin in view of Shinsky.

Referring to claim 1, Ravkin discloses an image sensing apparatus for a microscope in figure 1 comprising an image sensing unit 32 for sensing an observation image, a computer 35 comprising a display 72 in figure 2 for viewing the observation image obtained by the sensing unit 32 and a microscopy technique determination unit for detecting a microscopy technique between bright field and fluorescent image capture modes.

Figure 4a shows the chromaticity determining method taught by Ravkin where chromaticity is determined on the basis of the detected microscopy technique to determine a region of interest to perform image processing by finding the difference between the maximum intensity value and the background intensity value to all pixels (Col. 8, Lines 8 – 62).

Ravkin also provides a luminance distribution determination unit for calculating a luminance distribution shown in figure 4B of the observation image on the basis of the microscopy technique to distinguish areas of interest from background areas. For example, if the image is a fluorescent image, the background is set equal to the value of the darkest pixel in the image. Ravkin discloses that further image processing is only performed on the detected areas of interest shown in step 170 of figure 5 (Col. 9, Line 38 – Col. 11, Line 15).

However, tone adjustment and color balance adjustment units are not disclosed as a specific image processing means by Ravkin. Official Notice is taken that tone and color balance adjustments are well known methods of signal processing.

Therefore it would have been obvious to provide a tone adjusting means and color balance adjusting means as the image processing means of Ravkin to produce a high quality image.

Ravkin does not disclose a position designating unit, white balance control unit, and a white balance correction unit. However, Shinksy discloses a camera system having a display unit for displaying an observation image, a white balance correcting unit for correcting white balance in the observation image, a position designation unit in the form of a cursor for designating a desired position the user determines to be white in the observation image on the display, and a control unit for detecting and controlling white balance on the basis of the position designated by the user in the observation image (Col. 9, Lines 40 – 56).

Therefore it would have been obvious to provide the white balance system of Shinksy with the image capture system of Ravkin so that the user can properly designate white areas in the image to ensure correct white balance.

2. Referring to claim 2, Ravkin discloses an image sensing apparatus for a microscope in figure 1 comprising an image sensing unit 32 for sensing an observation image, a computer 35 comprising a display 72 in figure 2 for viewing the observation image obtained by the sensing unit 32 and a microscopy technique determination unit for detecting a microscopy technique between bright field and fluorescent image capture modes.

Figure 4a shows the chromaticity determining method taught by Ravkin where chromaticity is determined on the basis of the detected microscopy technique to determine a

Art Unit: 2612

region of interest to perform image processing by finding the difference between the maximum intensity value and the background intensity value to all pixels (Col. 8, Lines 8 – 62).

However, a color balance adjustment unit is not disclosed as a specific image processing means. Official Notice is taken that performing a color balance adjustment on a captured image is a well known method of signal processing.

Therefore it would have been obvious to provide a color balance adjusting means as the image processing means of Ravkin to produce a high quality image.

3. Referring to claim 3, Ravkin also provides a luminance distribution determination unit for calculating a luminance distribution shown in figure 4B of the observation image on the basis of the microscopy technique to distinguish areas of interest from background areas. For example, if the image is a fluorescent image, the background is set equal to the value of the darkest pixel in the image. Ravkin discloses that further processing is only performed on the detected areas of interest shown in step 170 of figure 5 (Col. 8, Lines 8 – 62 and Col. 9, Line 38 – Col. 11, Line 15). However, a tone adjustment unit is not disclosed as a specific image processing means. Official Notice is taken that performing a tone adjustment on a captured image is a well known method of signal processing.

Therefore it would have been obvious to provide a tone adjusting means as the image processing means of Ravkin to produce a high quality image.

4. Referring to claim 4, Ravkin discloses a display unit 75 in figure 2 for displaying the observation image obtained the sensing unit 32.

Ravkin does not disclose a position designating unit, white balance control unit, and a white balance correction unit. However, Shinksy discloses a camera system having a display unit for displaying an observation image, a white balance correcting unit for correcting white balance in the observation image, a position designation unit in the form of a cursor for designating a desired position the user determines to be white in the observation image on the display, and a control unit for detecting and controlling white balance on the basis of the position designated by the user in the observation image (Col. 9, Lines 40 – 56).

Therefore it would have been obvious to provide the white balance system of Shinksy with the image capture system of Ravkin so that the user can properly designate white areas in the image to ensure correct white balance.

5. Referring to claim 10, Ravkin discloses an image sensing apparatus for a microscope in figure 1 comprising an image sensing unit 32 for sensing an observation image and a microscopy technique determination unit for detecting a microscopy technique between bright field and fluorescent image capture modes. Ravkin also provides a luminance distribution determination unit for calculating a luminance distribution shown in figure 4B of the observation image on the basis of the microscopy technique to distinguish areas of interest from background areas. For example, if the image is a fluorescent image, the background is set equal to the value of the darkest pixel in the image. Ravkin discloses that further processing is only performed on the detected areas of interest shown in step 170 of figure 5 (Col. 8, Lines 8 – 62 and Col. 9, Line 38 – Col. 11, Line 15). However, a tone adjustment unit is not disclosed as a specific image

processing means. Official Notice is taken that performing a tone adjustment on a captured image is a well known method of signal processing.

Therefore it would have been obvious to provide a tone adjusting means as the image processing means of Ravkin to produce a high quality image.

6. Claims 5 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinsky in view of Ravkin.

Referring to claim 5, Shinsky discloses a camera system having a display unit for displaying an observation image, a white balance correcting unit for correcting white balance in the observation image, a position designation unit in the form of a cursor for designating a desired position the user determines to be white in the observation image on the display, and a control unit for detecting and controlling white balance on the basis of the position designated by the user in the observation image (Col. 9, Lines 40 – 56).

Shinsky does not disclose that image sensing unit is provided for a microscope. However, Ravkin discloses that it is well known to provide a digital camera 32 in figure 1 to record microscope images.

Therefore it would have been obvious to capture microscope images as taught by Ravkin with the electronic camera of Shinsky so as to properly white balance the microscopy images.

7. Referring to claim 6, once the white balance has been determined, the control unit of Shinsky holds the white balance for the captured image (Col. 9, Lines 40 – 56).

Art Unit: 2612

8. Referring to claim 7, the position designation unit of Shinsky allows the user to select an area of pixels in the observation image (Col. 9, Lines 40 – 56).

9. Referring to claim 8, once the white balance has been determined, the control unit of Shinsky holds the white balance for the captured image (Col. 9, Lines 40 – 56).

10. Referring to claim 9, Ravkin discloses a microscopy technique determining it for detecting a microscopy technique in the microscope so that bright field and fluorescent images can be analyzed and processed accordingly as shown in figures 3 and 4a (Col. 8, Lines 8 – 62 and Col. 9, Line 38 – Col. 11, Line 15).

Ravkin also provides a luminance distribution determination unit for calculating a luminance distribution shown in figure 4B of the observation image on the basis of the microscopy technique used to capture the image to distinguish areas of interest from background areas. For example, if the image is a fluorescent image, the background is set equal to the value of the darkest pixel in the image. Ravkin discloses that further processing is only performed on the detected areas of interest shown in step 170 of figure 5.

However, a tone adjustment unit is not disclosed as a specific image processing means. Official Notice is taken that performing a tone adjustment on a captured image is a well known method of signal processing.

Therefore it would have been obvious to provide a tone adjusting means as the image processing means of Ravkin to produce a high quality image.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tatsumi discloses a white balance control based on detecting a negative or positive mode of image capture.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew L Rosendale whose telephone number is (703) 305-4909. The examiner can normally be reached on Monday - Friday 8: 00am-4: 00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.

MLR



WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600